

## GENERAL NOTES

- ## DESIGN CRITERIA

- ## DESIGN CRITERIA (CONT'D)

- ## REQUIRED SHOP DRAWING SUBMITTALS

- ## SPECIALTY ENGINEERING REQUIREMENTS

- ## FOUNDATION NOTES

- SLAB ON GRADE

- SOG3 GENERAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF SAW JOINTS AND CJ's WITH ARCHITECTURAL FLOOR FINISHES TO ENSURE SLAB JOINTS DO NOT READ THROUGH.

## CONCRETE AND REINFORCING

- | LOCATION   | 28 DAY STRENGTH                                 | SLUMP      | COURSE AGGREGATE |        |
|--|---|------------|------------------|--------|
|  |   |            | MIN.             | MAX.   |
| FOUNDATIONS  | 3000 PSI  | 4" +/ - 1" | 3/4"             | 1 1/2" |
| SLAB ON GRADE: 4" THICK  | 3000 PSI  | 4" +/ - 1" | 3/4"             | 1 1/2" |
| SLAB ON GRADE: 5" + THICK  | 4000 PSI (MINIMUM FLEXURAL STRENGTH = 550 PSI.) | SEE NOTE 1 | 3/4"             | 1 1/2" |
| TIE BEAMS AND TIE COLUMNS  | 3000 PSI  | 4" +/ - 1" | 3/8"             | 3/4"   |
| BEAMS AND COLUMNS  | 4000 PSI  | 4" +/ - 1" | 3/4"             | 1"     |
| FILLED CELLS, PRECAST LINTELS & BOND BEAM GROUT (ASTM C476) - SEE NOTE 2 | 3000 PSI  | 8" TO 11"  | SAND             | 3/8"   |
- NOTES:  
 1. SLUMP FOR RAMPS AND SLOPING SURFACES SHALL NOT EXCEED 4".  
 2. SEE MASONRY NOTE M10 FOR TESTING REQUIREMENTS OF GROUT TO BE USED TO FILL CORES OF CMU.

- 44 CONCRETE MIX DESIGN SUBMITTALS.
1. EACH MIX DESIGN SHALL BE LABELED TO INDICATE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (I.E. FOUNDATIONS, SLAB-ON-GRADE, COLUMNS, ETC). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS.
2. PROPOSED MIX DESIGN SHALL BE IN ACCORDANCE WITH METHOD 1 OR METHOD 2 OF ACI 301. PROVIDE SUPPORTING DATA IN TABULAR FORM FOR EACH SEPARATE PROPOSED MIX.
3. SUBMIT CONCRETE MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE.
- C5 NO CALCIUM CHLORIDE SHALL BE USED IN MIX DESIGNS.
- C6 MAXIMUM W/C RATIO OF 0.55 FOR FOOTINGS AND 0.50 FOR OTHER CONCRETE. CMU GROUT SHALL HAVE W/C RATIO OF 0.60 OR HIGHER. MAX W/C RATIO FOR TILT-UP PANELS SHALL BE 0.45.
- C7 REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60.
- C8 WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. LAP MINIMUM DISTANCE OF ONE CROSS WIRE SPACING PLUS 2 INCHES.
- C9 SPICE REINFORCING ONLY WHERE SHOWN ON THE DRAWINGS. WHERE CONTINUOUS REINFORCING IS CALLED OUT, SUCH REINFORCING MAY BE SPLICED WHERE APPROVED BY THE ENGINEER. WHERE SPLICED LENGTHS ARE NOT SPECIFIED, USE 48 BAR DIAMETERS IN MASONRY AND 48 BAR DIAMETERS IN CONCRETE.
- C10 PROVIDE CONCRETE COVER OVER REINFORCEMENT AS FOLLOWS, UNLESS OTHERWISE NOTED:
- |                       |   |
|-----------------------|---|
| BEAMS (OVER STIRRUPS) | 1-1/2" (#5 BARS AND SMALLER)<br>2" (#6 THROUGH #18) |
| COLUMNS (OVER TIES)   | 1-1/2" (#5 BARS AND SMALLER)<br>2" (#6 THROUGH #18) |
| FOOTINGS              | 3"  |
| SLABS                 | 1-1/2" FROM TOP                                     |
- C11 AT CHANGES IN DIRECTION OF CONCRETE WALLS AND BEAMS, PROVIDE CORNER BARS OF SAME SIZE SPACING AS HORIZONTAL STEEL.
- C12 PROVIDE STANDARD HOOKS FOR ALL TOP REINFORCING BARS AT DISCONTINUOUS ENDS. HOOKS MAY FROM VERTICAL TO OBTAIN PROPER CONCRETE COVER.
- C13 GROUT UNDER BEARING PLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE WITH A COMPRESSIVE AT LEAST 6000 PSI IN SEVEN DAYS. VIBROPRUF #11, BY LAMBERT CORPORATION, OR ACCEPTED SUBSTITUTES.
- C14 ALL FORMWORK SHALL BE DESIGNED, ERECTED, SUPPORTED, BRACED, AND MAINTAINED ACCORDING TO RECOMMENDED STANDARD PRACTICE FOR CONCRETE FORMWORK.
- C15 RESPONSIBILITY: THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- C16 ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED WHERE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.

## STRUCTURAL STEEL NOTES

- CONCRETE MASONRY UNITS NOT

- MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-05/ASCE 5-05/TMS 402-05) AND "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6/TMS 602)." REFERRED TO HEREINAFTER AS (SMS).
- M2 THE COMPRESSIVE STRENGTH OF MASONRY (f'm) SHALL BE AT LEAST 1500 psi. THIS SHALL BE DETERMINED BEFORE CONSTRUCTION.
- M3 USE THE UNIT STRENGTH METHOD TO DETERMINE f'm. DETERMINE f'm BASED ON STRENGTH OF UNIT AND TYPE OF MORTAR SPECIFIED. UNITS SHALL CONFORM TO ASTM C90, TYPE II, NORMAL WT. AND SHALL BE TESTED IN ACCORDANCE WITH ASTM C140 THICKNESS OF BED JOINTS SHALL NOT EXCEED 5/8 IN. LAID IN RUNNING BOND ONLY.
- M4 THE G.C. SHALL SUBMIT MIX DESIGNS AND TEST RESULTS FOR MORTAR AND GROUT BEFORE CONSTRUCTION BEGINS.
- M5 MORTAR SHALL COMPLY WITH ASTM C270, TYPE M FOR RETAINING WALLS AND WALLS BELOW GRADE, TYPE S FOR TYPE II MASONRY. COMPRESSIVE STRENGTH = 2500 PSI AND 1800 PSI RESPECTIVELY. SITE TESTED MORTAR CUBES SHALL ACHIEVE A MINIMUM OF 80% OF THE DESIGN COMPRESSIVE STRENGTH).
- M6 HAND MIXING MORTAR IS NOT ALLOWED.
- M7 PIGMENTS WILL NOT BE ALLOWED IN MORTAR MIX.
- M8 GROUT AND MORTAR SHALL BE FIELD TESTED AS DESCRIBED IN SECTION 3.7 (SMS) AND SPECIFICATIONS.
- M9 GROUT FOR FILLED CELLS SHALL CONFORM TO ASTM C476, LATEST REVISION, (SHALL HAVE A SLUMP OF BETWEEN 8" AND 10". PUMP 4"-Ø MAXIMUM GROUT LIFTS WITH 60 MIN. DELAY BETWEEN LIFTS. GROUT COMPRESSIVE STRENGTH SHALL BE 3000 PSI AT 28 DAYS. ALL MASONRY BELOW SLAB OR GRADE SHALL BE SOLIDLY GROUTED. GROUT SHALL BE SAMPLED & TESTED ACCORDING TO ASTM C 1109 AT A FREQUENCY OF ONCE PER LIFT.
- M10 SAMPLING AND TESTING WILL BE IN ACCORDANCE W/ SECTION 1.6 – TABLE 4 – LEVEL II QUALITY ASSURANCE (SMS).
- M11 THE G.C. WILL PROVIDE CERTIFICATION FOR REINFORCING STEEL, JOINT REINFORCEMENT, ANCHOR BOLTS, TIES, ANCHORS, METAL ACCESSORIES, AND CMU UNITS TO BE USED.
- M12 REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60.
- M13 MATERIAL SHALL CONFORM TO THE FOLLOWING, EXCEPT AS NOTED:  
PLATE AND BENT BAR ANCHORS: ASTM A572 GRADE 50.  
SHEET METAL ANCHORS AND TIES: ASTM A366/A366M  
WIRE MESH TIES: ASTM A 185 OR ASTM A 197.  
WIRE TIES AND ANCHORS: ASTM A 82, & ASTM A167, TYPE 304.  
ANCHOR BOLTS: ASTM A 307, GRADE A.
- M14 REINFORCE JOINTS WITH LADDER-TYPE REINFORCEMENT CONFORMING TO ASTM A 951 AT 16" o.c. MEASURED VERTICALLY. LAP ALL JOINT REINFORCEMENT 6" MIN.
- M15 REINFORCE MASONRY OPENINGS GREATER THAN 1'-0" WIDE, WITH HR1Z JOINT REINF PLACED IN (2) HORIZ JOINTS APPROXIMATELY 8" APART, IMMEDIATELY ABOVE THE LINTEL AND IMMEDIATELY BELOW THE SILL. EXTEND REINFORCING A MINIMUM OF 2'-0" BEYOND JAMBS OF THE OPENING EXCEPT AT CORNER JOINTS. PROVIDE AN ANCHOR FOR ADDITIONAL REQUIREMENTS.
- M16 EXTEND ALL VERTICAL WALL REINFORCEMENT TO WITHIN 2" OF TOP OF WALL OR BEAM U.N.O. TERMINATE REINFORCING WITH STANDARD ACI 90 DEGREE HOOK IF ROOF JOISTS AND/OR TRUSSES BEAR ON TOP OF WALL AND THERE IS NO PARAPET. IF PARAPET EXISTS, HOOK IS NOT REQUIRED.
- M17 MASONRY CONSTRUCTION JOINTS SHALL BE LOCATED AT ALL RETURNS AND SPACED NO GREATER THAN 24'-8". JOINTS SHALL ALSO BE PLACED AT A MINIMUM OF 2'-8" FROM OPENINGS. ALSO SEE DETAILS.
- M18 JOINT FILLERS SHALL BE A PREMOLED 3/8" JOINT FILLER.
- M19 OPENINGS SHALL HAVE A MINIMUM OF ONE BLOCK CELL AT EACH JAMB GROUTED AND REINFORCED ALSO SEE DETAILS.
- M20 PROVIDE PRECAST CONCRETE LINTEL @ ALL OPENINGS U.N.O. PROVIDE 6" BEARING EACH END, MIN. REINFORCE W/1-#5, EXTENDED 2'-0" EACH END. REFER TO DETAILS.
- M21 AT FILLED CELLS, LAY UNITS WITH FULL BED JOINTS AROUND CELLS. USE PLAIN END TWO CELLED UNIT.
- M22 UNLESS NOTED OTHERWISE BOND BEAMS ELEVATIONS ARE SHOWN ON ROOF PLANS.
- M23 USE CORED HOLES W/ STEEL SLEEVES WHEN OPENINGS ARE REQUIRED FOR DRAIN PIPES. AVOID REINF. CELLS.
- M24 WHERE CONCRETE BEAMS ARE INSTALLED IN CONCRETE BLOCK WALL, SUPPORT CONCRETE WITH 6" WIDE CONTINUOUS STRIPS OF POUR STOP MATERIAL (DUR-O-STOP OR EQUIV.) USE OF ROOFING FELT STRIPS OR ALUMINUM W/ NOT BE PERM FOR SUBSECT GROUTING.
- M25 IF TEMPERATURE FALLS BELOW 40 DEG F, OR EXCEEDS 100 DEG. F SPECIAL CONSTRUCTION MEASURES SHALL BE TAKEN AS PER FBC 2104.3 AND 2104.4.
- M26 ALL MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES IN THE FINAL CONSTRUCTED CONFIGURATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY BRACE THE WALLS FOR VERTICAL AND LATERAL LOADS THAT COULD POSSIBLY BE APPLIED PRIOR TO COMPLETION OF LATERAL SUPPORT BY CONNECTIONS AT FLOORS OR ROOF FRAMING LEVELS.
- M27 GROUT PLACEMENT STOPPED FOR ONE HOUR OR MORE SHALL BE STOPPED 1 1/2" BELOW THE TOP OF THE MASONRY. DO NOT BE PERM FOR SUBSECT GROUTING.
- M28 TYPICAL VERTICAL REINFORCING SIZE AND SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.

## METAL BUILDING GENERAL NOTES

- MB1 SOUTHAUD ENGINEERING, INC. IS ONLY RESPONSIBLE FOR FOUNDATION DESIGN. ALL OTHER STRUCTURAL COMPONENTS ARE TO BE DESIGNED BY THE METAL BUILDING DESIGN ENGINEER.
- MB2 THE METAL BUILDING DESIGN ENGINEER SHALL CONSULT W/ THE M.E.P. ENGINEER TO DETERMINE THE APPROPRIATE DEAD LOADS FOR THE DESIGN OF THE METAL BUILDING SHELL.
- MB3 FLORIDA PRODUCT APPROVAL NUMBERS SHALL BE SUBMITTED FOR THE ROOF PANELS & WALL PANELS.
- MB4 SIGNED AND SEALED METAL BLDG. SHOP DRAWINGS SHALL BE SUBMITTED. SHOP DRAWINGS SHALL INCLUDE ALL COLUMN REACTION LOADS SO THAT THE FOOTINGS MAY BE VERIFIED.
- MB5 ALL COLUMN ANCHOR BOLTS MUST HAVE A MINIMUM EDGE DISTANCE OF 12 INCHES.
- MB6 MAX LATERAL STORY DRIFT SHALL BE LIMITED TO L/200.
- TIMBER TRUSSES**
- TT1 A CONFIRMED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE COMPLIANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.
- TT2 SHOP DRAWING SUBMITTALS, INCLUDING, BUT NOT LIMITED TO, PLANS, DETAILS AND CALCULATIONS SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW PRIOR TO FABRICATION. CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS PROJECT LOCATION. "SOUTHAUD ENGINEERING, INC." WILL REQUIRE THAT THE ENGINEERED DRAWINGS FOR THE WOOD TRUSSES BE REVIEWED FOR COMPATIBILITY WITH THE DESIGN INTENT OF THE STRUCTURE PRIOR TO FABRICATION. ANY AND ALL COSTS ASSOCIATED WITH FABRICATING AND SUBMITTING SUBMITTALS NOT BEARING OUR SHOP DRAWING STAMP AND APPROVAL WILL BE THE SOLE RESPONSIBILITY OF THE C.C.

## SIMILAR TYPE STRUCTURES.

- T15 USE SOUTHERN YELLOW PINE FOR ALL TRUSS MEMBERS.
- T16 THE ROOF PLAN SHOWN HEREIN IS A GRAPHICAL REPRESENTATION ONLY. REFER TO TRUSS SUBMITTALS FOR ACTUAL LAYOUT, TRUSS PROFILES AND HOLD-DOWN REQUIREMENTS AT ALL TRUSS SUPPORTS.
- T17 ALL TRUSS TO TRUSS CONNECTIONS SHALL BE DESIGNED AND PROVIDED BY TRUSS MANUFACTURER. ALL TRUSS BEARING CONNECTIONS (AT SEATS) TO SUPPORTS SHALL BE DESIGNED AND PROVIDED BY TRUSS MANUFACTURER TO RESIST TRUSS UPLIFT REACTIONS.
- T18 TRUSSES SHALL BE SHOP FABRICATED, INCLUDING ANY FIELD SPLICE CONNECTION COMPONENTS AND SHIPPED TO SITE IN MAXIMUM LENGTHS AND HEIGHTS. FIELD FABRICATION OF TRUSSES WILL NOT BE PERMITTED.
- T19 ALL TOP AND BOTTOM CHORDS SHALL BE PRESSURE TREATED UNLESS NOTED OTHERWISE.
- T210 REVIEW ARCHITECTURAL FLOOR PLANS FOR OPERABLE WALLS THAT ARE SUSPENDED FROM THE TRUSSES. ANALYSIS FOR CLOSED, PARTIALLY OPEN AND OPEN POSITION LOAD CURVES IS REQ'D. REFER TO WALL MANUFACTURER FOR SPECIAL DEFLECTION CRITERIA.
- T211 REVIEW ARCHITECTURAL REFLECTED CEILING PLANS AND SECTIONS FOR SPECIAL CEILING CONDITIONS, INCLUDING CEILING SLOPES, TROFFERS, COFFERS, TRAYS, STEPS AND OTHER SPECIAL FEELING